IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Anand Shridhar Sawant, et al.	§ § §	Confirmation No.:	4997
Serial No.:	10/710,998	§ §	Group Art Unit:	2168
Filed:	08/16/2004	§ §	Examiner:	Jay A. Morrison
For:	File System for Digital Processing Systems with Limited Resources	§ § §	Docket No.:	TI-36864

REPLY BRIEF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby submit this Reply Brief in response to the Examiner's Answer to the Appeal Brief in the above-identified application. The Examiner's Answer was received on June 23, 2010.

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I. STATUS OF THE CLAIMS

Claims 29-52 are presently pending and rejected. Claims 1-28 are canceled. Claims 29-52 are presently appealed.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 29-52 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,567,887 ("Harmer") in view of U.S. Patent No. 6,604,170 ("Suzuki").

III. ARGUMENT

The Examiner asserts that Harmer's disclosure of the use of a caching mechanism to manage accesses to file system data such as the FAT table and directory structures would be understood by one of ordinary skill in the art as disclosing that the caching mechanism handles "cache misses" on the file system data by loading the requested file system data from a slower source. *See* Examiner's Answer at pp. 8-9. In making this assertion, the Examiner is improperly relying on selected portions of Harmer while ignoring the overall disclosure of Harmer. One of ordinary skill in the art upon a full and complete reading of Harmer would understand that all of the file system data is stored in system RAM and the caching mechanism is merely used as an interface for accessing the file system data. That is, there is no possibility of a "cache miss" as postulated by the Examiner when file system data is accessed because it is all stored in RAM.

The Examiner's assertion requires that a "slower source" storing file system data be available. No such "slower source" is disclosed by Harmon. Instead, as is shown in Fig. 2 and described in the associated text, all file system data is stored in the system RAM, and none is depicted as stored on the hard disk drive storing the files. *See, e.g.*, col. 3, l. 53 to col. 5, l. 22. This is in clear contrast to the prior art system of Fig. 1 in which the file system data is stored on the hard disk drive. The location of the file system data in the system of Harmon is also made apparent in the sole allowed independent claim. This claim recites a system in which a file directory having location data to locate data on a mass memory storage peripheral computer device is located on a host computer having system RAM, and the mass memory storage peripheral computer device is connected to the host computer by a peripheral bus, "wherein said mass memory storage peripheral computer device accesses said file directory and obtains said location data to locate data on said mass memory storage peripheral computer device." Note that the file directory is on the host computer and the mass memory storage peripheral computer device accesses it there to obtain location data.

In addition, the following citation from Harmon describing the operation of the system of Fig. 2 makes it clear that the caching mechanism does not access a "slower source" to retrieve file system data, but rather accesses it from system RAM.

> The loadable device driver 66 uses its internal caching mechanism 210 to find and supply the relevant file system data that is being requested by the operating system. The directory and cluster information is provided to the operating system *essentially at the speed of memory*. *This eliminates*

> *potentially many reads from the disk* in order to just start reading actual file data from the disk. The loadable device drive 66 is provided the file system data from its caching mechanism by accessing file system, such as directory information 206, cluster information 204, *directly from the memory* in system RAM 50.

Col. 5, ll. 12-22 [emphasis added]. This paragraph clearly states that the directory and system information is provided essentially at the speed of memory. The only way this is possible is if the information is in memory. The overhead of servicing a "cache miss" as posited by the Examiner would belie this statement. Also, this paragraph clearly states that reads from the disk for file system information are eliminated. The servicing of a "cache miss" as posited by the Examiner would require reading from the disk to acquire file system information.

Several other statements in Harmon also make it very clear that the caching mechanism does not access a "slower source" to retrieve file system data, but rather accesses it from system RAM. For example, Harmon explicitly discloses that: "the file system data is cached and used out of host computer RAM *instead of* from the mass memory storage computer device," (col. 3, ll. 28-31 [emphasis added]); "in accordance with the present invention, the caching mechanism 210 of loadable device driver 66 manages the storage, lookup, and updating of the file system information *directly out of system RAM* 50", (col. 4, ll. 34-38 [emphasis added]); [t]he present invention *eliminates the need* to perform these I/O access and reads and writes from/to the disk [for file system data] during the requesting of data from an application program (col. 5, ll. 8-11 [emphasis added]),; and, [w]ith the present invention, it is *no longer necessary to go to the drive* to determine the location of the data to be written or read from the disk. It is only necessary for the loadable device driver 66 to access or query the caching mechanism 210 in order to determine this information (col. 6, ll. 12-16 [emphasis added]). Also, in Fig. 10, Harmon shows that the file system data is "fixed in memory."

Based on the above, Harmon does not disclose caching of file system data as argued by the Examiner. That is, file system data is not moved into and out of memory by the caching mechanism. The Examiner's arguments in support of the rejection of most of the claim limitations rely on the Examiner's erroneous underlying interpretation of the operation of the caching mechanism when managing file system data.

For the foregoing reasons and for the reasons delineated in Appellants' Appeal Brief filed on March 12, 2010, the Examiner made errors in both the underlying findings of fact upon which the final conclusion of obviousness was based, and the reasoning

used to reach the legal conclusion of obviousness. Accordingly, Appellants request that the rejection of the claims be reversed, and the claims set for issue.

IV. CONCLUSION

For the reasons stated above and in Appellants' Appeal Brief filed on March 12, 2010, Appellants respectfully submit that the Examiner erred in rejecting all pending claims. Appellants believe that no fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, please charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 relating to this matter to Deposit Account Number 20-0668, for Texas Instruments Incorporated.

Respectfully submitted,

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